

IN THE CLAIMS

Please amend the claims as follows.

1. (Previously Presented) An integrated circuit (IC) package comprising:
a substrate supporting at least a die; and
a package stiffener mounted at a perimeter of the substrate, and arranged apart from the die on the substrate to deliver low-inductance current to the die, via the substrate, while concurrently providing stiffening support to the substrate.
2. (Currently Amended) An IC package as claimed in claim 1, wherein the package stiffener includes a copper (Cu) ring split into power and ground portions, and ~~plastic~~ insulating couplers ~~arranged to mechanically secure, while~~ electrically isolating the power and ground portions of the split copper (Cu) ring.
3. (Currently Amended) An IC package as claimed in claim 2, wherein the split copper (Cu) ring is mounted on the substrate, via a solder providing a low resistance path to deliver large amounts of current to the substrate and ~~remote~~ remove heat from the substrate.
4. (Previously Presented) An IC package as claimed in claim 1, wherein the substrate is one of a thick-core, a thin-core, and a coreless substrate in one of a ceramic, a flex, and an integrated circuit printed circuit board (IC-PCB) carrier package.
5. (Previously Presented) An IC package as claimed in claim 4, further being one of a pinned grid array (PGA), and a ball grid array (BGA) carrier package.
6. (Previously Presented) An IC package as claimed in claim 4, further being one of a flip chip pin grid array (FC-PGA), and a flip chip ball grid array (FC-BGA) carrier package.

7. (Previously Presented) An IC package as claimed in claim 1, wherein the package stiffener made of one of electrically conductive, insulating, and intermingled electrically conductive and insulating sections, is one of a molded, stamped, etched, extruded and deposited frame, and is capable of withstanding temperatures of at least normal IC operation.

8. (Previously Presented) An IC package as claimed in claim 2, further comprising a heat spreader plate bonded to the split copper (Cu) ring by epoxy and to the die by thermal interface material.

9. (Previously Presented) An IC package as claimed in claim 1, wherein the package stiffener is adapted to support at least partially a heat sink.

10. (Canceled)

11. (Withdrawn) An IC package comprising:
a substrate supporting at least a die; and
a capacitor stiffener mounted at a perimeter of the substrate, and arranged apart from the die on the substrate to deliver low-inductance current to the die, via the substrate, while concurrently providing stiffening support to the substrate.

12. (Withdrawn) An IC package as claimed in claim 11, wherein the capacitor stiffener has its respective side bonded to a power or ground plane in the substrate using solder.

13. (Withdrawn) An IC package as claimed in claim 11, wherein the capacitor stiffener includes a copper (Cu) ring split into power and ground portions, and plastic couplers arranged to mechanically secure, while electrically isolating the power and ground portions of the split copper (Cu) ring, and wherein the split copper (Cu) ring is mounted on the substrate, via a solder providing a low resistance path to deliver large amounts of current to the substrate and remote heat from the substrate.

14. (Withdrawn) An IC package as claimed in claim 11, wherein the substrate is one of a thin-core, and a coreless substrate of a ceramic, a flex, and an integrated circuit printed circuit board (IC-PCB) carrier package, to provide predetermined stiffening thereto.

15. (Withdrawn) An IC package as claimed in claim 14, further being one of a pinned grid array (PGA), and a ball grid array (BGA) carrier package.

16. (Withdrawn) An IC package as claimed in claim 14, further being one of a clip chip pin grid array (FC-PGA), and a flip chip ball grid array (FC-BGA) carrier package.

17. (Withdrawn) An IC package as claimed in claim 11, wherein the capacitor stiffener made of one of electrically conductive, insulating, and mixed electrically conductive, and insulating sections, is one of a molded, stamped, etched, extruded and deposited frame, and is capable of withstanding temperatures of at least normal IC operation.

18. (Withdrawn) An IC package as claimed in claim 12, further comprising a heat spreader plate bonded to the split copper (Cu) ring by epoxy and to the die by thermal interface material.

19. (Withdrawn) An IC as claimed in claim 17, wherein the capacitor stiffener is adapted to support partially a heat sink.

Claims 20-62. (Canceled)

63. (New) An integrated circuit (IC) package comprising:
a substrate having a die-side, wherein a die is disposed upon the die-side of the substrate;
and
a PGID disposed upon the die-side of the substrate, and spaced from the die to deliver low-inductance current to the die, via the substrate, while concurrently providing stiffening support to the substrate.

64. (New) An integrated circuit (IC) package as claimed in claim 63 further comprising a spreader plate that couples the PGID and the die, wherein the PGID and the die are in between the spreader plate and the substrate.

65. (New) An integrated circuit (IC) package as claimed in claim 63 wherein the PGID extends along at least two side edges of the substrate.

66. (New) An integrated circuit (IC) package as claimed in claim 63 wherein the PGID is positioned at two separate sections on the substrate.

67. (New) An integrated circuit (IC) package as claimed in claim 63 wherein the PGID is positioned at separate corner edges of the substrate.

68. (New) An integrated circuit (IC) package as claimed in claim 63 wherein the PGID is a ring that extends along the perimeter of the substrate.

69. (New) An integrated circuit (IC) package as claimed in claim 68 wherein the PGID has rounded corners.

70. (New) An integrated circuit (IC) package as claimed in claim 63 wherein the PGID and the substrate have similar coefficients of thermal expansion.

71. (New) An integrated circuit (IC) package as claimed in claim 63 wherein the PGID has a ground side portion and a power side portion.

72. (New) An integrated circuit (IC) package as claimed in claim 71 wherein the ground side portion and the power side portion are separated by insulating couplers.

73. (New) An integrated circuit (IC) package as claimed in claim 72 wherein the insulating couplers aid in the structural integrity of the PGID.

74. (New) An integrated circuit (IC) package as claimed in claim 63 further comprising a spreader plate that couples the PGID and the die, wherein the PGID and the die are in between the spreader plate and the substrate.

75. (New) An integrated circuit (IC) package as claimed in claim 74 wherein the spreader plate and the PGID are integral.

76. (New) An integrated circuit (IC) package comprising:
a substrate having a die-side, wherein a die is disposed upon the die-side of the substrate;
a power pod supplying power to the die; and
a package stiffener disposed upon the die-side of the substrate, and spaced from the die to deliver low-inductance current to the die, via the substrate, while concurrently providing stiffening support to the substrate, wherein the package stiffener electrically couples the power pod and the substrate.